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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/451,628	11/30/1999	AVI TEPMAN	AMAT/4285/MD	9301
32588	7590	06/08/2004	EXAMINER	
APPLIED MATERIALS, INC. 2881 SCOTT BLVD. M/S 2061 SANTA CLARA, CA 95050			ALEJANDRO MULERO, LUZ L	
			ART UNIT	PAPER NUMBER
			1763	

DATE MAILED: 06/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/451,628

Applicant(s)

TEPMAN ET AL.

Examiner

Luz L. Alejandro

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 8, 11-16, 18-22, 28-34 and 36-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 8, 11-16, 18-22, 28-34 and 36-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0304.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 8, 11-16, 18-19, 28-29, and 38-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mooring et al., WO 99/03133 in view of Rubin et al., U.S. Patent 4,852,516.

Mooring et al. shows the invention as claimed including an apparatus for processing substrates comprising: a transfer chamber 22 comprising one or more access ports 28; one or more load lock chambers 18 disposable about the transfer chamber; one or more process chambers 14 disposable about the transfer chamber; a

plumbing tray 44 disposable adjacent the transfer chamber and having facility connections for each process chamber and load lock chamber; and a chamber tray disposable adjacent each process chamber, load lock chamber and transfer chamber, the chamber tray in fluid communication with the facility connections of the plumbing tray, wherein each process chamber is disposable on each chamber tray (see figures 1-4 and page 6, line 25 to page 10, line 20).

Mooring et al. fails to expressly disclose the chamber trays each having a plurality of facility connections that are in fluid communication with the facility connections of the plumbing tray.

Rubin et al. discloses a chamber tray having a plurality of facility connections including links which include water lines, gas lines, vacuum lines, drain lines, and communication lines (see col. 1-line 7 to col. 8-line 60). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Mooring et al. so as to include a chamber tray having a plurality of facility connections which are in fluid communication with the facility connections of the plumbing tray because this will enable each chamber unit to function as a stand alone unit.

With respect to the rollable members, Rubin et al. discloses rollable support members 110 in a support frame 102 of a modular apparatus (see fig. 1 and col. 3-line 63 to col. 4-line 16). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of

Mooring et al. so as to include the rollable support members of Rubin et al. because this allows for easier removal and insertion of the modular components of the apparatus.

Regarding claims 38-46, note that the plumbing tray is a defined enclosure positioned underneath the transfer chamber which has a plurality of interfaces wherein each interface is adapted to communicate with the facility connections of one chamber tray, wherein each interface is further adapted to communicate with the facility connections of the plumbing tray.

Claims 20, 30-34, 36-37, and 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mooring et al., WO 99/03133 in view of Rubin et al., U.S. Patent 4,852,516 as applied to claims 1, 8, 11-16, 18-19, 28-29, and 38-46 above, and further in view of Lane et al., EP 0,843,340 A2.

Mooring et al. and Rubin et al. are applied as above but fail to expressly disclose two robots located within the transfer chamber and operable in tandem to transfer a pair of substrates through the processing positions so that the pair of substrates can be processed simultaneously or nearly simultaneously. Lane et al. discloses a transfer chamber wafer handler 500 that includes two robots located within the transfer chamber and operable in tandem to transfer a pair of substrates through the processing positions so that the pair of substrates can be processed simultaneously or nearly simultaneously (see, for example, figs. 13 and 15 and their descriptions). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Mooring et al. modified by Rubin et al. so as to include

the transfer chamber wafer handler of Lane et al. because this will allow for a higher throughput of the apparatus.

Regarding claims 47-49, note that the plumbing tray is a defined enclosure positioned underneath the transfer chamber which has a plurality of interfaces wherein each interface is adapted to communicate with the facility connections of one chamber tray, wherein each interface is further adapted to communicate with the facility connections of the plumbing tray.

Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mooring et al., WO 99/03133 in view of Rubin et al., U.S. Patent 4,852,516 and Lane et al., EP 0,843,340 A2, as applied to claims 20, 30-34, 36-37, and 47-49 above, and further in view of Richards, U.S. Patent 4,584,045.

Mooring et al., Rubin et al., and Lane et al. are applied as above but fail to expressly disclose wherein the transfer chamber comprises at least one lift, the lift comprising a support shaft, pedestal, lift assembly, and rotational assembly. Richards discloses a transfer chamber comprising a transfer means 84 which includes a lift, the lift comprising a pedestal, a support shaft, a lift assembly, and a rotational assembly, in order to provide the transfer means with suitable means for the desired movement (see figs. 1-3 and their descriptions). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Mooring et al. modified by Rubin et al. and Lane et al. so as to further comprise the lift means of Richards in order to increase the capability of movement of

the transfer means by providing suitable means for the desired movement of the transfer means.

Response to Arguments

Applicant's arguments filed 3/15/04 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). For example, the secondary reference, Rubin et al. (see, for example, col. 1-line 7 to col. 3-line 21, especially, col. 1, lines 9-19), clearly provides the suggestion and/or motivation to modify the apparatus of Mooring et al., and therefore the rejection under 35 U.S.C. 103 over the combination of the references is proper and is respectfully maintained.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does

not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion


Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luz L. Alejandro whose telephone number is 571-272-1430. The examiner can normally be reached on Monday to Thursday from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory L. Mills can be reached on 571-272-1439. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Luz L. Alejandro
Primary Examiner
Art Unit 1763

June 3, 2004